

BARCLAYS CAPITAL CONVERTIBLE BONDS A TECHNICAL INTRODUCTION

BARCLAYS CAPITAL CONVERTIBLE BONDS A TECHNICAL INTRODUCTION BARCLAYS CAPITAL CONVERTIBLE BONDS A TECHNICAL BARCLAYS CAPITAL A PROMINENT PLAYER IN GLOBAL FINANCIAL MARKETS HAS HISTORICALLY BEEN A SIGNIFICANT ISSUER AND UNDERWRITER OF CONVERTIBLE BONDS THESE COMPLEX SECURITIES BLEND THE FEATURES OF TRADITIONAL DEBT AND EQUITY OFFERING A UNIQUE RISKREWARD PROFILE FOR BOTH ISSUERS AND INVESTORS THIS ARTICLE PROVIDES A TECHNICAL INTRODUCTION TO BARCLAYS CAPITAL CONVERTIBLE BONDS BRIDGING ACADEMIC THEORY WITH PRACTICAL IMPLICATIONS EMPHASIZING THE INTRICACIES OF VALUATION AND RISK MANAGEMENT UNDERSTANDING CONVERTIBLE BONDS CONVERTIBLE BONDS ARE DEBT INSTRUMENTS THAT OFFER THE BONDHOLDER THE RIGHT BUT NOT THE OBLIGATION TO CONVERT THE BOND INTO A PREDETERMINED NUMBER OF SHARES OF THE ISSUING COMPANYS COMMON STOCK AT A SPECIFIED PRICE CONVERSION PRICE WITHIN A DEFINED PERIOD CONVERSION PERIOD THIS DUAL NATURE PRESENTS A CRUCIAL DISTINCTION FROM STRAIGHT DEBT OFFERING POTENTIAL UPSIDE PARTICIPATION IN THE ISSUERS EQUITY APPRECIATION WHILE RETAINING THE DOWNSIDE PROTECTION OF A DEBT INSTRUMENT THE CONVERSION FEATURE IMBUES THE BOND WITH AN EMBEDDED OPTION MAKING ITS VALUATION SIGNIFICANTLY MORE COMPLEX THAN CONVENTIONAL FIXEDINCOME SECURITIES KEY FEATURES OF BARCLAYS CAPITAL CONVERTIBLE BONDS ILLUSTRATIVE WHILE SPECIFIC FEATURES VARY ACROSS INDIVIDUAL ISSUANCES SOME COMMON ELEMENTS INCLUDE PRINCIPAL AMOUNT THE FACE VALUE OF THE BOND REPAID AT MATURITY COUPON RATE THE PERIODIC INTEREST PAYMENT EXPRESSED AS A PERCENTAGE OF THE PRINCIPAL AMOUNT BARCLAYS CAPITAL BONDS TYPICALLY HAVE COMPETITIVE COUPON RATES REFLECTING PREVAILING MARKET CONDITIONS AND CREDIT RISK CONVERSION PRICE THE PRICE PER SHARE AT WHICH THE BOND CAN BE CONVERTED INTO COMMON STOCK CONVERSION RATIO THE NUMBER OF SHARES RECEIVED PER BOND UPON CONVERSION THIS IS INVERSELY RELATED TO THE CONVERSION PRICE RATIO PRINCIPAL AMOUNT CONVERSION PRICE MATURITY DATE THE DATE ON WHICH THE PRINCIPAL AMOUNT IS REPAID UNLESS CONVERTED EARLIER CALL PROVISION A CLAUSE ALLOWING THE ISSUER BARCLAYS CAPITAL IN THIS CASE TO REDEEM THE BOND 2 BEFORE MATURITY AT A SPECIFIED PRICE THIS OFTEN HAPPENS IF THE SHARE PRICE SIGNIFICANTLY RISES ABOVE THE CONVERSION PRICE PUT PROVISION A CLAUSE ALLOWING THE BONDHOLDER TO SELL THE BOND BACK TO THE ISSUER BEFORE MATURITY OFTEN AT A PREDETERMINED PRICE THIS OFFERS DOWNSIDE PROTECTION TO THE INVESTOR VALUATION OF CONVERTIBLE BONDS VALUING CONVERTIBLE BONDS IS SIGNIFICANTLY MORE CHALLENGING THAN VALUING STRAIGHT DEBT BECAUSE IT NECESSITATES CONSIDERING THE EMBEDDED OPTIONALITY SEVERAL MODELS ARE EMPLOYED INCLUDING OPTIONBASED MODELS THESE MODELS SUCH AS THE BLACKSCHOLES MODEL OR ITS EXTENSIONS TREAT THE CONVERSION FEATURE AS A CALL OPTION ON THE ISSUERS STOCK THE BONDS VALUE IS THE SUM OF ITS STRAIGHT DEBT VALUE AND THE VALUE OF THE EMBEDDED CALL OPTION THIS REQUIRES ESTIMATING VOLATILITY OF THE UNDERLYING STOCK RISKFREE INTEREST RATES AND THE TIME TO MATURITY BINOMIAL AND TRINOMIAL TREES THESE NUMERICAL METHODS PROVIDE A MORE FLEXIBLE APPROACH TO VALUING CONVERTIBLE BONDS PARTICULARLY WHEN DEALING WITH COMPLEX FEATURES LIKE CALL PROVISIONS EARLY REDEMPTION OR PATHDEPENDENT PAYOFFS THEY MODEL THE EVOLUTION OF THE STOCK PRICE AND BOND VALUE OVER TIME USING A BRANCHING TREE STRUCTURE MONTE CARLO SIMULATION THIS STOCHASTIC METHOD SIMULATES A LARGE NUMBER OF POSSIBLE STOCK PRICE PATHS TO ESTIMATE THE EXPECTED VALUE OF THE CONVERTIBLE BOND THIS IS ESPECIALLY USEFUL FOR COMPLEX INSTRUMENTS WITH MULTIPLE EMBEDDED FEATURES ILLUSTRATIVE VALUATION EXAMPLE SIMPLIFIED LETS CONSIDER A SIMPLIFIED EXAMPLE A BARCLAYS CAPITAL CONVERTIBLE BOND WITH A PRINCIPAL OF 1000 A CONVERSION PRICE OF 50 AND A CURRENT STOCK

PRICE OF 40 USING A SIMPLIFIED BLACK SCHOLES MODEL IGNORING DIVIDENDS AND OTHER COMPLEXITIES WE COULD ESTIMATE THE VALUE OF THE EMBEDDED CALL OPTION IF THE STRAIGHT DEBT VALUE IS 950 AND THE OPTION VALUE IS 30 THE TOTAL BOND VALUE WOULD BE 980 INSERT A CHART HERE SHOWING A SIMPLIFIED BLACKSCHOLES VALUATION MODEL INPUTS AND OUTPUTS THE CHART SHOULD ILLUSTRATE THE SENSITIVITY OF THE BOND VALUE TO CHANGES IN STOCK PRICE VOLATILITY AND INTEREST RATES

REAL WORLD APPLICATIONS AND RISK MANAGEMENT CONVERTIBLE BONDS ARE USED BY CORPORATIONS FOR VARIOUS PURPOSES INCLUDING RAISING CAPITAL AT A LOWER COST THAN STRAIGHT EQUITY THE COUPON PAYMENTS ARE TAX DEDUCTIBLE MAKING THEM ATTRACTIVE COMPARED TO EQUITY ISSUANCE

3 DELAYING DILUTION OF EXISTING SHAREHOLDERS CONVERSION ONLY HAPPENS IF THE STOCK PRICE APPRECIATES SUFFICIENTLY

MANAGING FINANCIAL FLEXIBILITY THE ISSUER RETAINS FLEXIBILITY DEPENDING ON MARKET CONDITIONS AND STRATEGIC OBJECTIVES HOWEVER INVESTORS NEED TO BE AWARE OF THE ASSOCIATED RISKS

CREDIT RISK THE RISK OF DEFAULT BY THE ISSUER

BARCLAYS CAPITAL IN THIS CASE

MARKET RISK THE RISK OF ADVERSE MOVEMENTS IN THE UNDERLYING STOCK PRICE AFFECTING THE VALUE OF THE BOND

INTEREST RATE RISK CHANGES IN INTEREST RATES CAN AFFECT THE VALUE OF THE BONDS

STRAIGHT DEBT COMPONENT

CONVERSION RISK THE RISK THAT THE STOCK PRICE MAY NOT APPRECIATE SUFFICIENTLY TO MAKE CONVERSION WORTHWHILE

EFFECTIVE RISK MANAGEMENT INVOLVES THOROUGH DUE DILIGENCE DIVERSIFICATION AND SOPHISTICATED MODELING TECHNIQUES TO ASSESS AND MITIGATE THESE RISKS

CONCLUSION BARCLAYS CAPITAL CONVERTIBLE BONDS PRESENT A COMPLEX BUT POTENTIALLY REWARDING INVESTMENT OPPORTUNITY UNDERSTANDING THEIR INTRICATE FEATURES AND EMPLOYING APPROPRIATE VALUATION MODELS ARE CRUCIAL FOR BOTH ISSUERS AND INVESTORS

THE INTERPLAY BETWEEN THE DEBT AND EQUITY COMPONENTS INFLUENCED BY MARKET DYNAMICS PRESENTS A CHALLENGE TO TRADITIONAL FINANCIAL ANALYSIS

FURTHER RESEARCH INTO DYNAMIC HEDGING STRATEGIES AND THE INFLUENCE OF MACROECONOMIC FACTORS ON CONVERTIBLE BOND VALUATIONS REMAINS A FERTILE AREA FOR ACADEMIC AND PRACTICAL EXPLORATION

THE FUTURE OF CONVERTIBLE BONDS LIKELY INVOLVES EVER INCREASING SOPHISTICATION IN THEIR DESIGN AND VALUATION DRIVEN BY THE ONGOING INNOVATION IN FINANCIAL ENGINEERING

ADVANCED FAQs

1 HOW DOES THE CREDIT RATING OF THE ISSUER IMPACT THE VALUATION OF A CONVERTIBLE BOND THE CREDIT RATING INFLUENCES THE STRAIGHT DEBT COMPONENTS VALUE A LOWER CREDIT RATING NECESSITATES A HIGHER DISCOUNT RATE THUS REDUCING THE BONDS OVERALL VALUE

2 WHAT ARE THE IMPLICATIONS OF DIFFERENT TYPES OF CALL PROVISIONS EG MAKEWHOLE CALLS MANDATORY CALLS DIFFERENT CALL PROVISIONS SIGNIFICANTLY IMPACT INVESTOR RETURNS AND THE BONDS OVERALL VALUATION

MAKEWHOLE CALLS FOR EXAMPLE OFFER THE ISSUER THE OPTION TO REPURCHASE THE BOND AT A PRICE THAT COMPENSATES THE INVESTOR FOR THE LOSS OF FUTURE CASH FLOWS THIS REDUCES INVESTOR UPSIDE POTENTIAL

4 3 HOW CAN STOCHASTIC INTEREST RATE MODELS BE INCORPORATED INTO CONVERTIBLE BOND VALUATION

STOCHASTIC INTEREST RATE MODELS SUCH AS THE CIR MODEL OR THE HULL WHITE MODEL ALLOW FOR A MORE REALISTIC REPRESENTATION OF INTEREST RATE VOLATILITY LEADING TO MORE ACCURATE VALUATION ESPECIALLY FOR LONG MATURITY CONVERTIBLE BONDS

4 WHAT ARE THE TAX IMPLICATIONS OF HOLDING AND CONVERTING A CONVERTIBLE BOND

THE TAX TREATMENT OF CONVERTIBLE BONDS VARIES ACROSS JURISDICTIONS AND DEPENDS ON WHETHER THE CONVERSION IS CONSIDERED A SALE OR AN EXCHANGE

PROFESSIONAL TAX ADVICE IS CRUCIAL TO UNDERSTAND THESE IMPLICATIONS

5 HOW DO MARKET IMPLIED VOLATILITIES FROM OPTIONS ON THE UNDERLYING STOCK INFORM CONVERTIBLE BOND VALUATION

MARKET IMPLIED VOLATILITIES FROM OPTIONS ON THE UNDERLYING STOCK PROVIDE A MARKET BASED ESTIMATE OF FUTURE VOLATILITY WHICH CAN BE USED IN OPTION PRICING MODELS TO ENHANCE THE ACCURACY OF CONVERTIBLE BOND VALUATION ESPECIALLY WHEN HISTORICAL VOLATILITY IS UNRELIABLE OR SCARCE

THE HANDBOOK OF CONVERTIBLE BONDS
 CONVERTIBLE BONDS (DEMYSTIFIED)
 INTERNATIONAL HANDBOOK OF CONVERTIBLE SECURITIES
 MANAGING A CORPORATE BOND PORTFOLIO
 THE COMPLETE GUIDE TO CONVERTIBLE SECURITIES WORLDWIDE
 THE OXFORD GUIDE TO FINANCIAL MODELING
 ON THE DESIGN OF CONVERTIBLE BONDS
 VALUING CONVERTIBLE BONDS UNDER THE ASSUMPTION OF STOCHASTIC INTEREST RATES
 BRADSHAW'S RAILWAY ALMANACK, DIRECTORY, SHAREHOLDERS'

GUIDE, AND MANUAL CONVERTIBLE SECURITIES CONVERTIBLE BONDS UND EXCHANGEABLES THE STOCK EXCHANGE OFFICIAL INTELLIGENCE BETWEEN THE OCEAN AND THE LAKES MOODY'S MANUAL OF RAILROADS AND CORPORATION SECURITIES VALUATION OF CONVERTIBLE BONDS WHEN INVESTORS ACT STRATEGICALLY RAILWAY LOCOMOTIVES AND CARS AMERICAN LAW REPORTS ANNOTATED MOODY'S ANALYSES OF RAILROAD INVESTMENTS TAX STRATEGIES FOR CORPORATE ACQUISITIONS, DISPOSITIONS, SPIN-OFFS, JOINT VENTURES AND OTHER STRATEGIC ALLIANCES, FINANCINGS, REORGANIZATIONS AND RESTRUCTURINGS CORPORATION FINANCE JAN DE SPIEGELEER SHERIDAN YVON THOMAS NODDINGS LELAND E. CRABBE LAURA A. ZUBULAKE THOMAS S. Y. HO A. ARUN KUMAR PETER CARAYANNOPOULOS GEORGE BRADSHAW MONTGOMERY ROLLINS NICO FISCHER EDWARD HAROLD MOTT CHRISTIAN KOZIOL JOHN MOODY RICHARDS CLINTON OSBORN

THE HANDBOOK OF CONVERTIBLE BONDS CONVERTIBLE BONDS (DEMYSTIFIED) INTERNATIONAL HANDBOOK OF CONVERTIBLE SECURITIES MANAGING A CORPORATE BOND PORTFOLIO THE COMPLETE GUIDE TO CONVERTIBLE SECURITIES WORLDWIDE THE OXFORD GUIDE TO FINANCIAL MODELING ON THE DESIGN OF CONVERTIBLE BONDS VALUING CONVERTIBLE BONDS UNDER THE ASSUMPTION OF STOCHASTIC INTEREST RATES BRADSHAW'S RAILWAY ALMANACK, DIRECTORY, SHAREHOLDERS' GUIDE, AND MANUAL CONVERTIBLE SECURITIES CONVERTIBLE BONDS UND EXCHANGEABLES THE STOCK EXCHANGE OFFICIAL INTELLIGENCE BETWEEN THE OCEAN AND THE LAKES MOODY'S MANUAL OF RAILROADS AND CORPORATION SECURITIES VALUATION OF CONVERTIBLE BONDS WHEN INVESTORS ACT STRATEGICALLY RAILWAY LOCOMOTIVES AND CARS AMERICAN LAW REPORTS ANNOTATED MOODY'S ANALYSES OF RAILROAD INVESTMENTS TAX STRATEGIES FOR CORPORATE ACQUISITIONS, DISPOSITIONS, SPIN-OFFS, JOINT VENTURES AND OTHER STRATEGIC ALLIANCES, FINANCINGS, REORGANIZATIONS AND RESTRUCTURINGS CORPORATION FINANCE JAN DE SPIEGELEER SHERIDAN YVON THOMAS NODDINGS LELAND E. CRABBE LAURA A. ZUBULAKE THOMAS S. Y. HO A. ARUN KUMAR PETER CARAYANNOPOULOS GEORGE BRADSHAW MONTGOMERY ROLLINS NICO FISCHER EDWARD HAROLD MOTT CHRISTIAN KOZIOL JOHN MOODY RICHARDS CLINTON OSBORN

THIS IS A COMPLETE GUIDE TO THE PRICING AND RISK MANAGEMENT OF CONVERTIBLE BOND PORTFOLIOS CONVERTIBLE BONDS CAN BE COMPLEX BECAUSE THEY HAVE BOTH EQUITY AND DEBT LIKE FEATURES AND NEW MARKET ENTRANTS WILL USUALLY FIND THAT THEY HAVE EITHER A KNOWLEDGE OF FIXED INCOME MATHEMATICS OR OF EQUITY DERIVATIVES AND THEREFORE HAVE NO IDEA HOW TO INCORPORATE CREDIT AND EQUITY TOGETHER INTO THEIR EXISTING PRICING TOOLS PART I OF THE BOOK COVERS THE IMPACT THAT THE 2008 CREDIT CRUNCH HAS HAD ON THE MARKETS IT THEN SHOWS HOW TO BUILD UP A CONVERTIBLE BOND AND INTRODUCES THE READER TO THE TRADITIONAL CONVERTIBLE VOCABULARY OF YIELD TO PUT PREMIUM CONVERSION RATIO DELTA GAMMA VEGA AND PARITY THE MARKET OF STOCK BORROWING AND LENDING WILL ALSO BE COVERED IN DETAIL USING AN INTUITIVE APPROACH BASED ON THE JENSEN INEQUALITY THE AUTHORS WILL ALSO SHOW THE ADVANTAGES OF USING A HYBRID TO ADD VALUE PRE 2008 MANY INVESTORS LABELLED CONVERTIBLE BONDS AS INVESTING WITH NO DOWNSIDE THERE ARE OF COURSE PLENTY OF 2008 EXAMPLES TO PROVE THAT THEY WERE WRONG THE AUTHORS THEN GO ONTO GIVE A COMPLETE EXPLANATION OF THE DIFFERENT FEATURES THAT CAN BE EMBEDDED IN CONVERTIBLE BOND PART II SHOWS READERS HOW TO PRICE CONVERTIBLES IT COVERS THE DIFFERENT PARAMETERS USED IN VALUATION MODELS CREDIT SPREADS VOLATILITY INTEREST RATES AND BORROW FEES AND MATURITY PART III COVERS INVESTMENT STRATEGIES FOR EQUITY FIXED INCOME AND HEDGE FUND INVESTORS AND INCLUDES DYNAMIC HEDGING AND CONVERTIBLE ARBITRAGE PART IV EXPLAINS THE ALL IMPORTANT RISK MANAGEMENT PART OF THE PROCESS IN DETAIL THIS IS A HIGHLY PRACTICAL BOOK ALL PRODUCTS PRICED ARE REAL WORLD EXAMPLES AND NUMERICAL EXAMPLES ARE NOT LIMITED TO HYPOTHETICAL CONVERTIBLES IT IS A MUST READ FOR ANYONE WANTING TO SAFELY GET INTO THIS HIGHLY LIQUID HIGH RETURN MARKET

CONVERTIBLE BONDS AN INVESTMENT FOR ALL SEASONS IN THIS BOOK WE WILL DISCOVER THERE ARE ONLY FIVE 5 MAJOR TERMS THAT WE NEED TO UNDERSTAND IN

ORDER TO BE ABLE TO INVEST SAFELY AND PROFITABLY IN CONVERTIBLE BONDS THE SECRET OF HOW A CONVERTIBLE BOND AUTOMATICALLY SWITCHES ITSELF FROM A BOND INVESTMENT TO AN EQUITY INVESTMENT THROUGH ITS OWN INTERNAL MECHANISM A LIST OF FOUR HUNDRED AND SIXTY EIGHT CONVERTIBLE BONDS 468 INCLUDING FOURTEEN MAIN CRITERIA 14 FOR EACH CONVERTIBLE BOND A PROVEN TWENTY YEAR 20 INVESTMENT PROGRAM DESCRIBED STEP BY STEP AND UNDERSTANDABLE BY EVERYBODY THE SHERIDAN MARKET NEUTRAL HEDGE INVESTMENT PROGRAM PROVEN TWENTY YEAR 20 INVESTMENT PROGRAM WE WILL INVEST IN ONE OF THE SAFEST INVESTMENT AROUND OUR INVESTMENT PROGRAMS SHOULD YIELD AN AVERAGE NET RETURN OF FIFTEEN PERCENT YEARLY 15 ON A CASH INVESTMENT BASIS OUR AVERAGE HOLDING PERIOD PER INVESTMENT SHOULD BE FROM TWO YEARS 2 TO FIVE YEARS 5 BY THE END OF THE BOOK WE WILL BE ABLE TO SET UP A CONVERTIBLE BOND INVESTMENT PROGRAM ON OUR OWN AND BECOME OUR OWN MONEY MANAGER

FIRST PUBLISHED IN 2001 THE REVISION OF THIS IMPORTANT WORK CONTAINS ALL NEW DATA ON THE LONG OVERLOOKED CONVERTIBLE SECURITIES MARKET IT OFFERS INVALUABLE INFORMATION ON THE ANALYTICAL AS WELL AS THE STATISTICAL TOOLS WHICH INVESTORS NEED TO ADD QUALITY TO THEIR INVESTMENT PORTFOLIOS TOPICS INCLUDE CONVERTIBLE SECURITIES AS AN ASSET CLASS AND AS AN ALTERNATIVE INVESTMENT MARKET CAPITALIZATION OF CONVERTIBLE SECURITIES AN OVERVIEW OF THE EQUITY WARRANT MARKET SPECIAL PROVISIONS IN THE WARRANT MARKETS FINDING UNDERVALUED WARRANTS CONVERTIBLE BOND HEDGING STRATEGIES PORTFOLIO MANAGEMENT

PRAISE FOR MANAGING A CORPORATE BOND PORTFOLIO CRABBE AND FABOZZI S MANAGING A CORPORATE BOND PORTFOLIO IS A REFRESHINGLY GOOD BOOK ON THE NEGLECTED TOPIC IN FIXED INCOME PORTFOLIO MANAGEMENT IF YOU WANT TO UNDERSTAND THE LATEST THINKING IN CORPORATE BONDS WHAT DRIVES PRICES AND WHY READ THIS BOOK YOU WILL EMERGE WITH KNOWLEDGE THAT WILL HELP YOU GET AN EDGE IN THE COMPETITIVE INVESTING ARENA TIM OPLER DIRECTOR FINANCIAL STRATEGY GROUP CSFB A PRACTITIONER S GUIDE A CREATIVE COMPREHENSIVE AND PRACTICAL BOOK THAT ADDRESSES THE MYRIAD OF CHALLENGES FACING MANAGERS OF CORPORATE BOND PORTFOLIOS THE CHAPTER ON LIQUIDITY TRADING AND TRADING COSTS IS A MUST READ MARY ROONEY HEAD OF CREDIT STRATEGY MERRILL LYNCH AS A SENIOR PORTFOLIO MANAGER RESPONSIBLE FOR MANAGING BILLIONS OF DOLLARS INVESTED IN FIXED INCOME PRODUCT DURING THE MID 1990S LEE CRABBE WAS THE ONE WALL STREET STRATEGIST THAT I WOULD READ EVERY WEEK TO HELP ME FIGURE OUT WHERE VALUE WAS IN THE CORPORATE BOND MARKET AND FOR INSIGHTFUL AND EASY TO UNDERSTAND SPECIAL REPORTS THAT EDUCATED ME AND MOST INVESTORS ON THE RISKS AND OPPORTUNITIES INHERENT IN NEW STRUCTURES AND SUBORDINATED PRODUCTS FORTUNATELY FOR ME AND INVESTORS LEE CRABBE AND FRANK FABOZZI HAVE WRITTEN THIS BOOK WHICH COMPILES MUCH OF THEIR PREVIOUS WORK ON CORPORATE BOND VALUATION ALONG WITH NEW FEATURES THAT ARE A MUST READ ESPECIALLY IN LIGHT OF THE VOLATILE TIMES IN THE CORPORATE BOND MARKET OVER THE PAST FEW YEARS FOR PORTFOLIO MANAGERS ANALYSTS TRADERS AND EVEN STRATEGISTS IF THERE IS ONE BOOK IN YOUR BOOKSHELF THAT YOU SHOULD HAVE ON CORPORATE BOND PORTFOLIO MANAGEMENT IT IS THIS ONE WILLIAM H CUNNINGHAM MANAGING DIRECTOR DIRECTOR OF CREDIT STRATEGY J P MORGAN SECURITIES INC WILEYFINANCE.COM

BEGINS WITH AN ANALYSIS OF A TYPICAL U S DOLLAR DENOMINATED EUROCONVERTIBLE GOES ON TO DISCUSS INTERNATIONAL CONVERTIBLE SECURITIES AND SUCH RELATED TOPICS AS CURRENCY FLUCTUATION AND FOREIGN CURRENCY EXPOSURE THE CHARACTERISTICS OF DOMESTIC MARKETS IN U S BRITAIN JAPAN FRANCE AUSTRALIA AND CANADA AND THEIR UNIQUE FEATURES AND EVALUATION METHODS ARE EXAMINED FINALLY IT LOOKS AT CONVERTIBLE HEDGING BREAK-EVEN ANALYSIS RISK PROFILE AND RATE OF RETURN

THE ESSENTIAL PREMISE OF THIS BOOK IS THAT THEORY AND PRACTICE ARE EQUALLY IMPORTANT IN DESCRIBING FINANCIAL MODELING IN IT THE AUTHORS TRY TO STRIKE A BALANCE IN THEIR DISCUSSIONS BETWEEN THEORIES THAT PROVIDE FOUNDATIONS FOR FINANCIAL MODELS AND THE INSTITUTIONAL DETAILS THAT PROVIDE THE CONTEXT FOR APPLICATIONS OF THE MODELS THE BOOK PRESENTS THE FINANCIAL MODELS OF STOCK AND BOND OPTIONS EXOTIC OPTIONS INVESTMENT GRADE AND HIGH YIELD BONDS CONVERTIBLE BONDS MORTGAGE BACKED SECURITIES LIABILITIES OF FINANCIAL INSTITUTIONS THE BUSINESS MODEL AND THE CORPORATE MODEL IT ALSO DESCRIBES THE APPLICATIONS OF THE MODELS TO CORPORATE FINANCE FURTHERMORE IT RELATES THE MODELS TO FINANCIAL STATEMENTS RISK MANAGEMENT FOR AN ENTERPRISE AND ASSET LIABILITY MANAGEMENT WITH ILLIQUID INSTRUMENTS THE FINANCIAL MODELS ARE PROGRESSIVELY PRESENTED FROM OPTION PRICING IN THE SECURITIES MARKETS TO FIRM VALUATION IN CORPORATE FINANCE FOLLOWING A FORMAT TO EMPHASIZE THE THREE ASPECTS OF A MODEL THE SET OF ASSUMPTIONS THE MODEL SPECIFICATION AND THE MODEL APPLICATIONS GENERALLY FINANCIAL MODELING BOOKS SEGMENT THE WORLD OF FINANCE AS INVESTMENTS FINANCIAL INSTITUTIONS CORPORATE FINANCE AND SECURITIES ANALYSIS AND IN SO DOING THEY RARELY EMPHASIZE THE RELATIONSHIPS BETWEEN THE SUBJECTS THIS UNIQUE BOOK SUCCESSFULLY TIES THE THOUGHT PROCESSES AND APPLICATIONS OF THE FINANCIAL MODELS TOGETHER AND DESCRIBES THEM AS ONE PROCESS THAT PROVIDES BUSINESS SOLUTIONS CREATED AS A COMPANION WEBSITE TO THE BOOK READERS CAN VISIT THOMASHO.COM TO GAIN DEEPER UNDERSTANDING OF THE BOOK'S FINANCIAL MODELS INTERESTED READERS CAN BUILD AND TEST THE MODELS DESCRIBED IN THE BOOK USING EXCEL AND THEY CAN SUBMIT THEIR MODELS TO THE SITE READERS CAN ALSO USE THE SITE'S FORUM TO DISCUSS THE MODELS AND CAN BROWSE SERVER-BASED MODELS TO GAIN INSIGHTS INTO THE APPLICATIONS OF THE MODELS FOR THOSE USING THE BOOK IN MEETINGS OR CLASS SETTINGS THE SITE PROVIDES POWER POINT DESCRIPTIONS OF THE CHAPTERS STUDENTS CAN USE AVAILABLE QUESTION BANKS ON THE CHAPTERS FOR STUDYING

THE LARGE VOLUME OF LITERATURE ON CONVERTIBLE BONDS ADDRESSES TWO BASIC COMPLEXES OF PROBLEMS WHY AND UNDER WHICH CONDITIONS DO FIRMS ISSUE CONVERTIBLE BONDS WHAT IS THE FAIR VALUE OF A CONVERTIBLE BOND CHRISTIAN KOZIOL'S DISSERTATION DEALS WITH THE SECOND PROBLEM HIS DISSERTATION DIFFERS FROM THE PREDOMINANT PART OF THE LITERATURE IN TWO ASPECTS FIRST HE EXPLICITLY CONSIDERS THE STRATEGIC CHARACTER OF THE CONVERSION DECISION AS THE TIMING AND THE VOLUME OF CONVERSION AFFECT THE WEALTH OF THE STOCKHOLDERS AND THE REMAINING CONVERTIBLE BOND HOLDERS SECOND HE DEALS WITH A MORE GENERAL CAPITAL STRUCTURE WHERE THE FIRM HAS SUBORDINATED DEBT OUTSTANDING IN ADDITION TO CONVERTIBLE BONDS AND STOCKS WITHIN THIS SETTING HE CHARACTERIZES AND ANALYZES THE OPTIMAL CONVERSION STRATEGY AND THE ENDOGENOUS PRICES OF CONVERTIBLE BONDS STOCKS AND THE ADDITIONAL DEBT FOR THREE CASES ALL CONVERTIBLE BONDS ARE HELD BY A MONOPOLIST THE CONVERTIBLE BOND HOLDERS ACT COMPETITIVELY AND THE COMPETITIVE BOND HOLDERS ARE CONSTRAINED TO CONVERT THEIR BONDS IN ONE BLOCK THE THIRD VARIANT IS TYPICAL FOR THE OPTION THEORETIC VALUATION OF CONVERTIBLE BONDS THAT USES THE TYPICAL HIGH CONTACT CONDITION FOR AMERICAN OPTIONS

CONTAINING IN DETAILED FORM AN EXPERT COMPARATIVE ANALYSIS OF EACH OF THE RAILROAD SYSTEMS OF THE UNITED STATES WITH CAREFUL DEDUCTIONS ENABLING THE BANKER AND INVESTOR TO ASCERTAIN THE TRUE VALUES OF SECURITIES BY A METHOD BASED ON SCIENTIFIC PRINCIPLES PROPERLY APPLIED TO FACTS

WHEN SOMEBODY SHOULD GO TO THE EBOOK STORES, SEARCH INTRODUCTION BY SHOP, SHELF BY SHELF, IT IS IN POINT OF FACT PROBLEMATIC. THIS IS WHY WE PROVIDE THE BOOKS COMPILATIONS IN THIS WEBSITE. IT WILL ENORMOUSLY

EASE YOU TO LOOK GUIDE **BARCLAYS CAPITAL CONVERTIBLE BONDS A TECHNICAL INTRODUCTION** AS YOU SUCH AS. BY SEARCHING THE TITLE, PUBLISHER, OR AUTHORS OF GUIDE YOU ESSENTIALLY WANT, YOU CAN

DISCOVER THEM RAPIDLY. IN THE HOUSE, WORKPLACE, OR PERHAPS IN YOUR METHOD CAN BE EVERY BEST PLACE WITHIN NET CONNECTIONS. IF YOU PURPOSE TO DOWNLOAD AND INSTALL THE BARCLAYS CAPITAL CONVERTIBLE BONDS A TECHNICAL INTRODUCTION, IT IS AGREED EASY THEN, IN THE PAST CURRENTLY WE EXTEND THE ASSOCIATE TO PURCHASE AND CREATE BARGAINS TO DOWNLOAD AND INSTALL BARCLAYS CAPITAL CONVERTIBLE BONDS A TECHNICAL INTRODUCTION SO SIMPLE!

1. WHERE CAN I BUY BARCLAYS CAPITAL CONVERTIBLE BONDS A TECHNICAL INTRODUCTION BOOKS? BOOKSTORES: PHYSICAL BOOKSTORES LIKE BARNES & NOBLE, WATERSTONES, AND INDEPENDENT LOCAL STORES. ONLINE RETAILERS: AMAZON, BOOK DEPOSITORY, AND VARIOUS ONLINE BOOKSTORES OFFER A WIDE SELECTION OF BOOKS IN PRINTED AND DIGITAL FORMATS.
2. WHAT ARE THE DIFFERENT BOOK FORMATS AVAILABLE? WHICH TYPES OF BOOK FORMATS ARE PRESENTLY AVAILABLE? ARE THERE VARIOUS BOOK FORMATS TO CHOOSE FROM? HARDCOVER: STURDY AND LONG-LASTING, USUALLY MORE EXPENSIVE. PAPERBACK: MORE AFFORDABLE, LIGHTER, AND EASIER TO CARRY THAN HARDCOVERS. E-BOOKS: DIGITAL BOOKS ACCESSIBLE FOR E-READERS LIKE KINDLE OR THROUGH PLATFORMS SUCH AS APPLE BOOKS, KINDLE, AND GOOGLE PLAY BOOKS.
3. SELECTING THE PERFECT BARCLAYS CAPITAL CONVERTIBLE BONDS A TECHNICAL INTRODUCTION BOOK: GENRES: THINK ABOUT THE GENRE YOU PREFER (FICTION, NONFICTION, MYSTERY, SCI-FI, ETC.). RECOMMENDATIONS: SEEK RECOMMENDATIONS FROM FRIENDS, JOIN BOOK CLUBS, OR EXPLORE ONLINE REVIEWS AND SUGGESTIONS. AUTHOR: IF YOU FAVOR A SPECIFIC AUTHOR, YOU MIGHT APPRECIATE MORE OF THEIR WORK.
4. WHAT'S THE BEST WAY TO MAINTAIN BARCLAYS CAPITAL CONVERTIBLE BONDS A TECHNICAL INTRODUCTION BOOKS? STORAGE: STORE THEM AWAY FROM DIRECT SUNLIGHT AND IN A DRY SETTING. HANDLING: PREVENT FOLDING PAGES, UTILIZE BOOKMARKS, AND HANDLE THEM WITH CLEAN HANDS. CLEANING: OCCASIONALLY DUST THE COVERS AND PAGES GENTLY.
5. CAN I BORROW BOOKS WITHOUT BUYING THEM? PUBLIC LIBRARIES: REGIONAL LIBRARIES OFFER A DIVERSE SELECTION OF BOOKS FOR BORROWING. BOOK SWAPS: COMMUNITY BOOK EXCHANGES OR ONLINE PLATFORMS WHERE PEOPLE SHARE BOOKS.
6. HOW CAN I TRACK MY READING PROGRESS OR MANAGE MY BOOK CLIECTION? BOOK TRACKING APPS: LIBRARYTHING ARE POPOLAR APPS FOR TRACKING YOUR READING

PROGRESS AND MANAGING BOOK CLIECTIONS. SPREADSHEETS: YOU CAN CREATE YOUR OWN SPREADSHEET TO TRACK BOOKS READ, RATINGS, AND OTHER DETAILS.

7. WHAT ARE BARCLAYS CAPITAL CONVERTIBLE BONDS A TECHNICAL INTRODUCTION AUDIOBOOKS, AND WHERE CAN I FIND THEM? AUDIOBOOKS: AUDIO RECORDINGS OF BOOKS, PERFECT FOR LISTENING WHILE COMMUTING OR MOLTITASKING. PLATFORMS: LIBRIVOX OFFER A WIDE SELECTION OF AUDIOBOOKS.
8. HOW DO I SUPPORT AUTHORS OR THE BOOK INDUSTRY? BUY BOOKS: PURCHASE BOOKS FROM AUTHORS OR INDEPENDENT BOOKSTORES. REVIEWS: LEAVE REVIEWS ON PLATFORMS LIKE GOODREADS. PROMOTION: SHARE YOUR FAVORITE BOOKS ON SOCIAL MEDIA OR RECOMMEND THEM TO FRIENDS.
9. ARE THERE BOOK CLUBS OR READING COMMUNITIES I CAN JOIN? LOCAL CLUBS: CHECK FOR LOCAL BOOK CLUBS IN LIBRARIES OR COMMUNITY CENTERS. ONLINE COMMUNITIES: PLATFORMS LIKE BOOKBUB HAVE VIRTUAL BOOK CLUBS AND DISCUSSION GROUPS.
10. CAN I READ BARCLAYS CAPITAL CONVERTIBLE BONDS A TECHNICAL INTRODUCTION BOOKS FOR FREE? PUBLIC DOMAIN BOOKS: MANY CLASSIC BOOKS ARE AVAILABLE FOR FREE AS THEYRE IN THE PUBLIC DOMAIN.

FREE E-BOOKS: SOME WEBSITES OFFER FREE E-BOOKS LEGALLY, LIKE PROJECT GUTENBERG OR OPEN LIBRARY. FIND BARCLAYS CAPITAL CONVERTIBLE BONDS A TECHNICAL INTRODUCTION

INTRODUCTION

THE DIGITAL AGE HAS REVOLUTIONIZED THE WAY WE READ, MAKING BOOKS MORE ACCESSIBLE THAN EVER. WITH THE RISE OF EBOOKS, READERS CAN NOW CARRY ENTIRE LIBRARIES IN THEIR POCKETS. AMONG THE VARIOUS SOURCES FOR EBOOKS, FREE EBOOK SITES HAVE EMERGED AS A POPULAR CHOICE. THESE SITES OFFER A TREASURE TROVE OF KNOWLEDGE AND ENTERTAINMENT WITHOUT THE COST. BUT WHAT MAKES THESE SITES SO VALUABLE, AND WHERE CAN YOU FIND THE BEST ONES? LET'S DIVE INTO THE WORLD OF FREE EBOOK SITES.

BENEFITS OF FREE EBOOK SITES

WHEN IT COMES TO READING, FREE EBOOK SITES OFFER NUMEROUS ADVANTAGES.

COST SAVINGS

FIRST AND FOREMOST, THEY SAVE YOU MONEY. BUYING BOOKS CAN BE EXPENSIVE, ESPECIALLY IF YOU'RE AN AVID READER. FREE EBOOK SITES ALLOW YOU TO ACCESS A VAST ARRAY OF BOOKS WITHOUT SPENDING A DIME.

ACCESSIBILITY

THESE SITES ALSO ENHANCE ACCESSIBILITY. WHETHER YOU'RE AT HOME, ON THE GO, OR HALFWAY AROUND THE WORLD, YOU CAN ACCESS YOUR FAVORITE TITLES ANYTIME, ANYWHERE, PROVIDED YOU HAVE AN INTERNET CONNECTION.

VARIETY OF CHOICES

MOREOVER, THE VARIETY OF CHOICES AVAILABLE IS ASTOUNDING. FROM CLASSIC LITERATURE TO CONTEMPORARY NOVELS, ACADEMIC TEXTS TO CHILDREN'S BOOKS, FREE EBOOK SITES COVER ALL GENRES AND INTERESTS.

TOP FREE EBOOK SITES

THERE ARE COUNTLESS FREE EBOOK SITES, BUT A FEW STAND OUT FOR THEIR QUALITY AND RANGE OF OFFERINGS.

PROJECT GUTENBERG

PROJECT GUTENBERG IS A PIONEER IN OFFERING FREE EBOOKS. WITH OVER 60,000 TITLES, THIS SITE PROVIDES A WEALTH OF CLASSIC LITERATURE IN THE PUBLIC DOMAIN.

OPEN LIBRARY

OPEN LIBRARY AIMS TO HAVE A WEBPAGE FOR EVERY BOOK EVER PUBLISHED. IT

OFFERS MILLIONS OF FREE EBOOKS, MAKING IT A FANTASTIC RESOURCE FOR READERS.

GOOGLE BOOKS

GOOGLE BOOKS ALLOWS USERS TO SEARCH AND PREVIEW MILLIONS OF BOOKS FROM LIBRARIES AND PUBLISHERS WORLDWIDE. WHILE NOT ALL BOOKS ARE AVAILABLE FOR FREE, MANY ARE.

MANYBOOKS

MANYBOOKS OFFERS A LARGE SELECTION OF FREE EBOOKS IN VARIOUS GENRES. THE SITE IS USER-FRIENDLY AND OFFERS BOOKS IN MULTIPLE FORMATS.

BOOKBOON

BOOKBOON SPECIALIZES IN FREE TEXTBOOKS AND BUSINESS BOOKS, MAKING IT AN EXCELLENT RESOURCE FOR STUDENTS AND PROFESSIONALS.

HOW TO DOWNLOAD EBOOKS SAFELY

DOWNLOADING EBOOKS SAFELY IS CRUCIAL TO AVOID PIRATED CONTENT AND PROTECT YOUR DEVICES.

AVOIDING PIRATED CONTENT

STICK TO REPUTABLE SITES TO ENSURE YOU'RE NOT DOWNLOADING PIRATED CONTENT. PIRATED EBOOKS NOT ONLY HARM AUTHORS AND PUBLISHERS BUT CAN ALSO POSE SECURITY RISKS.

ENSURING DEVICE SAFETY

ALWAYS USE ANTIVIRUS SOFTWARE AND KEEP YOUR DEVICES UPDATED TO PROTECT AGAINST MALWARE THAT CAN BE HIDDEN IN DOWNLOADED FILES.

LEGAL CONSIDERATIONS

BE AWARE OF THE LEGAL CONSIDERATIONS WHEN DOWNLOADING EBOOKS. ENSURE THE SITE HAS THE RIGHT TO DISTRIBUTE THE BOOK AND THAT YOU'RE NOT VIOLATING COPYRIGHT LAWS.

USING FREE EBOOK SITES FOR EDUCATION

FREE EBOOK SITES ARE INVALUABLE FOR EDUCATIONAL PURPOSES.

ACADEMIC RESOURCES

SITES LIKE PROJECT GUTENBERG AND OPEN LIBRARY OFFER NUMEROUS ACADEMIC RESOURCES, INCLUDING TEXTBOOKS AND SCHOLARLY ARTICLES.

LEARNING NEW SKILLS

YOU CAN ALSO FIND BOOKS ON VARIOUS SKILLS, FROM COOKING TO PROGRAMMING, MAKING THESE SITES GREAT FOR PERSONAL DEVELOPMENT.

SUPPORTING HOMESCHOOLING

FOR HOMESCHOOLING PARENTS, FREE EBOOK SITES PROVIDE A WEALTH OF EDUCATIONAL MATERIALS FOR DIFFERENT GRADE LEVELS AND SUBJECTS.

GENRES AVAILABLE ON FREE EBOOK SITES

THE DIVERSITY OF GENRES AVAILABLE ON FREE EBOOK SITES ENSURES THERE'S SOMETHING FOR EVERYONE.

FICTION

FROM TIMELESS CLASSICS TO CONTEMPORARY BESTSELLERS, THE FICTION SECTION IS BRIMMING WITH OPTIONS.

NON-FICTION

NON-FICTION ENTHUSIASTS CAN FIND BIOGRAPHIES, SELF-HELP BOOKS, HISTORICAL TEXTS, AND MORE.

TEXTBOOKS

STUDENTS CAN ACCESS TEXTBOOKS ON A WIDE RANGE OF SUBJECTS, HELPING REDUCE THE FINANCIAL BURDEN OF EDUCATION.

CHILDREN'S BOOKS

PARENTS AND TEACHERS CAN FIND A PLETHORA OF CHILDREN'S BOOKS, FROM PICTURE BOOKS TO YOUNG ADULT NOVELS.

ACCESSIBILITY FEATURES OF EBOOK SITES

EBOOK SITES OFTEN COME WITH FEATURES THAT ENHANCE ACCESSIBILITY.

AUDIOBOOK OPTIONS

MANY SITES OFFER AUDIOBOOKS, WHICH ARE GREAT FOR THOSE WHO PREFER

LISTENING TO READING.

ADJUSTABLE FONT SIZES

YOU CAN ADJUST THE FONT SIZE TO SUIT YOUR READING COMFORT, MAKING IT EASIER FOR THOSE WITH VISUAL IMPAIRMENTS.

TEXT-TO-SPEECH CAPABILITIES

TEXT-TO-SPEECH FEATURES CAN CONVERT WRITTEN TEXT INTO AUDIO, PROVIDING AN ALTERNATIVE WAY TO ENJOY BOOKS.

TIPS FOR MAXIMIZING YOUR EBOOK EXPERIENCE

TO MAKE THE MOST OUT OF YOUR EBOOK READING EXPERIENCE, CONSIDER THESE TIPS.

CHOOSING THE RIGHT DEVICE

WHETHER IT'S A TABLET, AN E-READER, OR A SMARTPHONE, CHOOSE A DEVICE THAT OFFERS A COMFORTABLE READING EXPERIENCE FOR YOU.

ORGANIZING YOUR EBOOK LIBRARY

USE TOOLS AND APPS TO ORGANIZE YOUR EBOOK COLLECTION, MAKING IT EASY TO FIND AND ACCESS YOUR FAVORITE TITLES.

SYNCING ACROSS DEVICES

MANY EBOOK PLATFORMS ALLOW YOU TO SYNC YOUR LIBRARY ACROSS MULTIPLE DEVICES, SO YOU CAN PICK UP RIGHT WHERE YOU LEFT OFF, NO MATTER WHICH DEVICE YOU'RE USING.

CHALLENGES AND LIMITATIONS

DESPITE THE BENEFITS, FREE EBOOK SITES COME WITH CHALLENGES AND LIMITATIONS.

QUALITY AND AVAILABILITY OF TITLES

NOT ALL BOOKS ARE AVAILABLE FOR FREE, AND SOMETIMES THE QUALITY OF THE DIGITAL COPY CAN BE POOR.

DIGITAL RIGHTS MANAGEMENT (DRM)

DRM CAN RESTRICT HOW YOU USE THE EBOOKS YOU DOWNLOAD, LIMITING SHARING AND TRANSFERRING BETWEEN DEVICES.

INTERNET DEPENDENCY

ACCESSING AND DOWNLOADING EBOOKS REQUIRES AN INTERNET CONNECTION, WHICH CAN BE A LIMITATION IN AREAS WITH POOR CONNECTIVITY.

FUTURE OF FREE EBOOK SITES

THE FUTURE LOOKS PROMISING FOR FREE EBOOK SITES AS TECHNOLOGY CONTINUES TO ADVANCE.

TECHNOLOGICAL ADVANCES

IMPROVEMENTS IN TECHNOLOGY WILL LIKELY MAKE ACCESSING AND READING EBOOKS EVEN MORE SEAMLESS AND ENJOYABLE.

EXPANDING ACCESS

EFFORTS TO EXPAND INTERNET ACCESS GLOBALLY WILL HELP MORE PEOPLE BENEFIT FROM FREE EBOOK SITES.

ROLE IN EDUCATION

AS EDUCATIONAL RESOURCES BECOME MORE DIGITIZED, FREE EBOOK SITES WILL PLAY AN INCREASINGLY VITAL ROLE IN LEARNING.

CONCLUSION

IN SUMMARY, FREE EBOOK SITES OFFER AN INCREDIBLE OPPORTUNITY TO ACCESS A WIDE RANGE OF BOOKS WITHOUT THE FINANCIAL BURDEN. THEY ARE INVALUABLE RESOURCES FOR READERS OF ALL AGES AND INTERESTS, PROVIDING EDUCATIONAL MATERIALS, ENTERTAINMENT, AND ACCESSIBILITY FEATURES. SO WHY NOT EXPLORE THESE SITES AND DISCOVER THE WEALTH OF KNOWLEDGE

THEY OFFER?

FAQs

ARE FREE EBOOK SITES LEGAL? YES, MOST FREE EBOOK SITES ARE LEGAL. THEY TYPICALLY OFFER BOOKS THAT ARE IN THE PUBLIC DOMAIN OR HAVE THE RIGHTS TO DISTRIBUTE THEM. HOW DO I KNOW IF AN EBOOK SITE IS SAFE? STICK TO WELL-KNOWN AND REPUTABLE SITES LIKE PROJECT GUTENBERG, OPEN LIBRARY, AND GOOGLE BOOKS. CHECK REVIEWS AND ENSURE THE SITE HAS PROPER SECURITY MEASURES. CAN I DOWNLOAD EBOOKS TO ANY DEVICE? MOST FREE EBOOK SITES OFFER DOWNLOADS IN MULTIPLE FORMATS, MAKING THEM COMPATIBLE WITH VARIOUS DEVICES LIKE E-READERS, TABLETS, AND SMARTPHONES. DO FREE EBOOK SITES OFFER AUDIOBOOKS? MANY FREE EBOOK SITES OFFER AUDIOBOOKS, WHICH ARE PERFECT FOR THOSE WHO PREFER LISTENING TO THEIR BOOKS. HOW CAN I SUPPORT AUTHORS IF I USE FREE EBOOK SITES? YOU CAN SUPPORT AUTHORS BY PURCHASING THEIR BOOKS WHEN POSSIBLE, LEAVING REVIEWS, AND SHARING THEIR WORK WITH OTHERS.

